

**TEST: SEMEN ANALYSIS
SPERM WASH AND PREPARATION**

PRINCIPLE:

For a successful pregnancy to occur there are several variables to consider when analyzing semen or cryopreserving human spermatozoa for artificial insemination. Among these variables are volumes of semen per ejaculate, sperm count, motility and morphology.

SPECIMEN REQUIREMENTS:

A period of 48 to 72 hours of abstaining from ejaculation (including masturbation) is required to obtain accurate sperm concentrations. Period of less than 48 hours can result in decreased sperm concentrations, especially in older men. Intervals that exceed 4 days result in increased sperm concentrations with decrease in motile and viable forms.

A sample should be obtained at the laboratory or physician's office where the analysis will be performed. If this is not possible, the specimen must be brought to the laboratory within 2 hours of collection and maintained at body temperature during transport. This can be accomplished by carrying the sample in an inside pocket or holding it against the body with undergarments. Samples exposed to extreme heat or cold may exhibit increased viscosity and/or coagulation of the seminal fluid, resulting in a decrease in motility.

REFERENCES:

Adelman, M., Atlas of Sperm Morphology, ASCP Press, 1989.

Normal Range:

Normal semen should have the following parameters:

- 1. Volume: > 2ml**
- 2. Count: 40-160 x 10⁶/ml = Normal, 20-40 x 10⁶/ml = Borderline, 50 x 10⁶/dose needed for IUF**
- 3. Motility: > 50% motile**
NOTE: Quality of Motility:
 - 1 + = Sperm moving but no forward progression**
 - 2 + = Sperm moving aimlessly with slow forward progression**
 - 3 + = Sperm moving at moderate speed with forward progression**
 - 4 + = Sperm moving at high speed with straight-line forward progression**
- 4. Morphology: ≥ 50% normal heads**
- 5. Viscosity: Moderate.**

Turnaround Time: 24 hours for semen analysis

3 hours for sperm wash and preparation